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First Western Atlantic Occurrence of the Pigmy Killer Whale

PAULINE JAMES
PROFESSOR OF BIOLOGY
PAN AMERICAN COLLEGE, EDINBURG, TEXAS

FRANK W. JUDD
TEXAS TECH UNIVERSITY, LUBBOCK

AND

JOSEPH CURTIS MOORE
CURATOR OF MAMMALS
FIELD MUSEUM OF NATURAL HISTORY

After 1 1/4 centuries known to science from but two skulls of uncertain origin, *Feresa attenuata* Gray, 1875, has within two decades reached the hands of scientists as one adult in the flesh, then as a live school of 14. Now known off Japan (Yamada, 1954; Nishiwaki, 1966), Hawaii (Pryor et al., 1965), and Costa Rica (Perrin and Hubbs, 1969), thus spanning the North Pacific, it has also occurred in the South African edge of the Indian Ocean and Southwest African edge of the South Atlantic Ocean (Best, 1970), and on the Senegal coast of the North Atlantic Ocean (Cadenat, 1958; Fraser, 1960). It is here reported from the westernmost Gulf of Mexico, thus spanning the Atlantic. All of these occurrences are verifiable by specimens.

A visitor in Isla Blanca Park of Cameron County, Texas, discovered a freshly dead dolphin stranded near the north jetty of Brazos Santiago Pass on Padre Island (ca. lat. 26° 04' N., long. 97° 09' W.) on January 21, 1969. The park employees sent to bury it saw that it was not of a locally common kind and took it to Mr. Larry Allen, park superintendent. Impressed with its unfamiliar features and unable to obtain a confident identification locally, Mr. Allen stored it in a commercial freezer hoping to have the animal mounted for local display. Learning of this by local press and television, Judd urged that Pan American College obtain it, and James

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brought this about. Uncertainties persisted through Judd's efforts to identify the animal at Texas Tech University, and for help its skull was sent to Moore, who elaborated this note from James' preliminary account.

IDENTIFICATION

The presence of a row of simple, slightly-curved, single-rooted, conical teeth in both upper and lower jaws of an adult of a living species, places this cetacean in the order Odontoceti. In Dale W. Rice's (1967) synopsis of the families of living Odontoceti we find that the following characters distinguish this specimen: 1. comparatively broad, shallow rostrum, from Ziphiidae (p. 307); 2. ankylosis of some cervical vertebrae, from Monodontidae (p. 309); 3. facial depression slight and bounded posteriorly by nasals, from Physeteridae (p. 311); 4. palatine bones united at midline of palate instead of separated by vomer, from Platanistidae (p. 314); 5. mandibular symphysis being shorter than 0.20 of the length of the mandibular ramus, from Stenidae, sensu stricto (p. 315); and 6. teeth terete, from Phocaenidae (p. 319). We therefore place this specimen in the Delphinidae (Rice, 1967, p. 321).

The number of teeth (alveoli), nine in each side of the upper jaw, and of the lower jaw, distinguishes the Brazos Santiago Pass specimen from the eight genera of the subfamilies Delphininae, Cephalorhynchinae, and Lissodelphinae (Fraser, 1949, for tooth counts) and place it in the subfamily Orcininae closest to *Globicephala* and *Feresa* Rice (1967, p. 324). Its small size and the accordance of its 36 skull dimensions with the ranges of those of six males and six females of *Feresa* (Nishiwaki et al., 1965, pp. 36-38) demonstrate the Brazos Santiago Pass specimen to be *Feresa attenuata*, the pigmy killer whale.

MATURITY

Morphological maturity of this specimen is assured by Judd's observations that epiphyseal sutures of the vertebrae were all obliterated. This evidence is supported by the amount of wear on the teeth. Normal use has evidently worn varying amounts, 1 to 5 mm., from the apices of teeth by smooth natural wear, in 18 of the 20 examined by Moore. Four of the longest teeth range in length from 23.2 to 23.8 mm. Maximum diameter in 20 teeth is 8 mm. These maxima correspond well to those tabulated by Nishiwaki et al. (1965, p. 78) for the 87 teeth of two adult specimens. In addition to adult

size and wear, the teeth of the Brazos Santiago Pass whale have in 12 instances each filled its pulp cavity completely, or left but the slightest dimple unfilled. A thirteenth tooth has a larger unfilled pit perhaps a half mm. deep and 2 mm. in greatest diameter. Other preserved teeth are broken at the base.

We gratefully acknowledge Superintendent Larry Allen of Isla Blanca Park for the gift of the specimen to Pan American College, and Dr. L. O. Sorenson, Dean, School of Science and Mathematics, Pan American College, for essential support in having a cast made on which to mount the skin, and for obtaining the skeleton.

REFERENCES

BEST, PETER B.

1970. Records of the pygmy killer whale, *Feresa attenuata*, from southern Africa, with notes on behavior in captivity. *Ann. South African Mus.*, **57**, pp. 1-14, 9 pls.

CADENAT, J.

1958. Notes sur les delphinides uest-africaines. II. Un specimen du genre *Feresa* capture sur les cotes du Senegal. *Bull. Inst. Francais Afrique Noire*, (A), **20**, pp. 1486-1491.

FRASER, F. C.

1949. Cetacea, pp. 201-360, text figs. 60-97, color pls. VI-VIII. *In* Norman, J. R. and F. C. Fraser, Field book of giant fishes [whales and dolphins], G. P. Putnam's Sons, N. Y., xxii+376 pp.

1960. A specimen of the genus *Feresa* from Senegal. *Bull. Inst. Francais Afrique Noire*, (A), **22**, pp. 699-707.

NISHIWAKI, M.

1966. II. A discussion of rarities among the smaller Cetaceans caught in Japanese waters, pp. 192-204. *In* Norris, K. S., ed., Whales, Dolphins, and Porpoises. Univ. of Calif. Press.

NISHIWAKI, M., T. KASUYA, T. KAMIYA, T. TOBAYAMA, and M. NAKAJIMA.

1965. *Feresa attenuata* captured at the Pacific Coast of Japan in 1963. *Sci. Rept. Whales Res. Inst.*, **19**, pp. 65-90.

PERRIN, W. and C. L. HUBBS

1969. Observations on a young pygmy killer whale (*Feresa attenuata* Gray) from the eastern tropical Pacific Ocean. *Trans. San Diego Soc. Nat. Hist.*, **15**, pp. 297-308.

PRYOR, T., K. PRYOR and K. S. NORRIS

1965. Observations on a pygmy killer whale (*Feresa attenuata* Gray) from Hawaii. *Journ. Mammal.*, **46**, pp. 450-461.

RICE, D. W.

1967. Cetaceans, pp. 291-324. *In* Anderson, S. and J. K. Jones, eds., Recent Mammals of the World, a Synopsis of the Families. Ronald Press, New York.

YAMADA, M.

1954. An account of a rare porpoise, *Feresa* Gray from Japan. *Sci. Rept. Whales Res. Inst.*, **9**, pp. 59-88.



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